



broadband for rural Vermonters

September 13, 2010

Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street, S.W.  
Washington, D.C. 20554

Re: TV White Spaces  
ET Docket Nos. 04-186 and 02-380

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Dear Ms. Dortch:

My company, Cloud Alliance LLC, provides fixed wireless broadband service in Washington County and is poised to expand into Lamoille, Caledonia, and Orleans Counties in Vermont. We rely entirely on unlicensed spectrum to deliver broadband services to consumers that still have no broadband choices. Six years ago, at great personal risk, we built our network from scratch using devices authorized under the Part 15 rules the FCC adopted to open up 900 MHz, 2.4 GHz and 5 GHz spectrum for unlicensed broadband devices. We are also about to utilize the Part 90 rules for 3.65 GHz spectrum. Thanks to the Commission's initiatives, thousands of consumers in Vermont have been afforded broadband service that telephone and cable companies were unwilling to provide.

Cloud Alliance is very interested in utilizing television white spaces so that we can expand and improve service. Central Vermont is 80% forested, sparsely populated, and topographically irregular and steep. The lower frequencies are requisite to deliver service to consumers by non-line-of-sight links. It is challenging, to say the least, to rely so heavily on the limited spectrum of the unlicensed 900 MHz band. To reuse spectrum without self-interference, we use blocking terrain and tilt our antennas down considerably. This limits the coverage and forces us to invest in too many access points and tower sites. In turn, this cost limits our ability to expand our services. We are eager to see more unlicensed or "license-lite" spectrum below 1000 MHz become available. We are committed to deploying on TV white spaces as soon as equipment for point-to-multipoint service is commercially available.

I am pleased that the FCC will be acting on TV white space petitions for reconsideration in the near future. There are several proposals that would help us to deploy service and improve existing service:

First, the FCC should allow WISPs to operate using base station antennas mounted higher than 30 meters, and we should be allowed to install customer antennas (CPE) at heights below 10 meters. If we could increase our base station antenna height to 100 meters, we could cover three times more area with a base station and reduce our equipment, tower acquisition



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and tower lease fees by a large amount—an amount that could be the difference between deploying and not deploying in an area. We support the WISPA and Motorola proposals to increase base station height. By removing any minimum CPE height restrictions, we would not have to put tall masts on residences and we would be able to provide service at a lower cost.

Second, we believe we should be allowed to operate with power in excess of 4 Watts EIRP in rural areas. As is the case with tower height, operating with higher power will give us a greater coverage area and we will not need to spend as much money on infrastructure.

Third, we are very concerned about a proposal made by FiberTower and others to license white space spectrum for point-to-point wireless backhaul. Not only would adopting this proposal take six channels (36 MHz) (and perhaps even more channels) away from us, but WISPs also would have to protect these licensed links. Moreover, channels and areas far beyond the links would be blocked because the signals from the licensed links would overshoot the path and the endpoints. This is due to the low-cost, low-gain antennas FiberTower wants to use. We also would not deploy, if a licensed point-to-point user could come along later and put us out of business with a licensed link. We support the views expressed by WISPA in their September 8 letter and ask the FCC to reject the FiberTower proposal.

Motivated by a sense of public purpose, Cloud Alliance embarked upon and continues on a difficult path to serve its rural neighborhood. If we, and other WISPs like us across the country, were disadvantaged by ill-conceived regulation of this extraordinarily useful non-line-of-sight spectrum, it would be tragic for the communities we strive to serve.

Sincerely,

*Michael Birnbaum*

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